Occidental Chemical Corporation

February 12, 1988

Mr. V. Bryant
NYS Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-4010

Re: Pilot Plant Therminol Spill

Dear Mr. Bryant:

Occidental and its consultants have completed their analysis and review of data from samples taken in December 1987 to further define the extent of PCB occurance in the Pilot Plant Therminol Spill Area of the Hicksville Plant.

I have attached a copy of the report describing the results of the investigation. The area of PCB occurance is largely defined at this time. Mr. Lamonica of Leggette, Brashears and Graham, Inc. will be contacting Ruco shortly to arrange a final round of sampling. A remedial action plan will be prepared by April. Occidental has a goal of excavating and landfilling the soils containing PCBs in excess of the remedial action standard starting in May.

Very truly yours,

Alan F. Weston

Alan F. Weston, Ph.D.
Manager, Analytical Services
Special Environmental Programs

5764eAFWbma

OxyChem

Special Environmental Programs
Occidental Chemical Center
360 Rainbow Boulevard South, Box 728, Niagara Falls, New York 14302 716/286-3000

OCCIDENTAL CHEMICAL CORPORATION
RUCO POLYMER CORPORATION SITE
HICKSVILLE, NEW YORK

Additional Soil Investigations in the Vicinity of the Pilot Plant

Since June 1983, several phases of soil sampling have been completed to define the extent of PCB contaminated soil in the vicinity of the Pilot Plant at the Ruco Polymer Corporation site. The occurrence of the PCB's was reportedly due to a spill which affected a 6 foot by 6 foot area. The contamination was apparently spread over a much wider area, possibly due to storm-water runoff and sediment transport. The areal extent of contamination which may need remediation also increased due to a lowering of the remedial action standard from 50 mg/kg (milligrams per kilogram) to 10 mg/kg.

The most recent soil samples were taken on December 16 through 17, 1987. These samples were analyzed at the Occidental Chemical Corporation Laboratory on Grand Island, New York. All previous analytical work was performed at Environmental Testing and Certification (ETC) in Edison, New Jersey. All samples have been obtained by personnel of Leggette, Brashears & Graham, Inc. (LBG).

Previous sampling and analysis at the site has shown that, with the exception of the spill area and the former storm drain, the contamination is confined to the soils immediately below the asphalt or within the top one foot of soil in unpaved areas. In the former open, unlined drain, PCB's occur in the drain bed several feet below grade.

The extent of known contamination is shown on figure 1 and the analytical report is attached. The area of contamination has been largely defined at this time. A final round of samples will be obtained in February, 1988, and a remedial action plan will be prepared for review in

April, 1988. It is anticipated that the soils can be excavated and landfilled starting in May.

LEGGETTE, BRASHEARS & GRAHAM, INC.

Robert Lamonica, CPG
Vice President

gtk
February 2, 1988
Enclosure
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OxyChem
Technology Center

MEMO

To A.F. Weston **Date** January 13, 1988

From T.J. Yagley

Subject Aroclor 1248 Content of the Soils from Hicksville, N.Y.

COPIES: R.G. Badger, P.T. Holt, W.E. Leroux, TIC

SPECIAL ENVIRONMENTAL
JAN 18 REC'D

Project Personnel: M.L. Rougeux

SUMMARY

On December 18, 1987, eighteen soil samples from Hicksville, N.Y. were submitted for determination of their Aroclor 1248 content. Of those samples submitted, ten sites had concentrations of Aroclor 1248 higher than 10 ppm, and of those ten sites two had concentrations higher than 100 ppm. The remaining eight sites had Aroclor 1248 concentrations less than 10 ppm.

INTRODUCTION

In order to determine the extent of contamination, soil samples from eighteen sites at Hicksville, New York were analyzed for their Aroclor 1248 content. These samples were analyzed using the EPA CLP methodology, making slight variations of the method where needed.

EXPERIMENTAL

Before the work-up, each sample was forced through a #8 mesh sieve to separate the friable material from the non-friable material, (U.S. Standard Testing Sieve, #8 mesh, A.S.T.E-11 specifications, 2.36 mm opening). After sieving, the soils were tumbled for one hour to improve homogeneity, (Rotary Tumbler, Model 33B, Lortone, Inc.). These samples were now ready for analysis. One gram of sample was transferred to a 50 mL beaker, sodium sulfate was stirred in until the sample had a sandy texture, 50 uL of 20 ppm hexachlorobenzene (C66) in acetone was added as an internal standard and 10.0 mL of hexane was then added as the extraction solvent. The sample was then extracted for two minutes using a sonic disrupter (Heat Systems, Ultrasonics, Inc.), after which time the extract was decanted to a 5 mL Teflon-lined screw-top vial until analysis. Recovery experiments were performed in the same manner, with the addition of Aroclor 1248 occurring before the addition of hexane.

Determination of the moisture content of each sample was done by transferring approximately five grams (0.01 g accuracy) to a tared aluminum pan and heating for two hours at 110°C. After cooling in a dessicator, the samples were re-weighed and the moisture content was determined.

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RESULTS AND DISCUSSION

The results of this analysis can be found in Table I. The concentration of Aroclor 1248 is given in ug/g on a dry weight basis. Also given in Table I are the recoveries of the C66 surrogate, expressed as a percent of the original 1.0 ug added. Because it was not required by the CLP this figure has not been corrected for percent moisture.

Table II contains the results of three duplicate analysis. Site 216 and 225 were chosen for duplicate analysis because of their relatively low Aroclor 1248 concentrations. After weighing out two portions for duplicate analysis, a third portion was weighed out for spiking purposes. Site 216 was spiked with 4 ug/g Aroclor 1248, Site 225 was spiked with 2 ug/g of Aroclor 1248, while Site 232 was spiked with 1 ug/g of Aroclor 1248. This data is found in Table III. Spiking three different samples at three different levels provided an extra dimension to the recovery process. Site 232 was collected as a field blank and after analysis showed that it was indeed free of Aroclor 1248 it was used as a method blank and method blank spike. Table IV contains the moisture content of each soil. Percent moisture was determined by:

$$\frac{\text{grams wet weight - grams dry weight}}{\text{grams wet weight}} \times 100$$

Timothy Yagley

Timothy J. Yagley
Chemist
Central Sciences

/jb
Attachments

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Table I

Concentration of Aroclor 1248
Hicksville, N.Y.
ug/g dry weight basis

Sample I.D.	OCC Log #	Aroclor 1248	% C66 Recovery
S-215AA001A1	87-1642	19.0	55
S-216BB001A1	87-1643	14.5*	99
S-217CC001A1	87-1644	15.8	97
S-218DD001A1	87-1645	12.9	97
S-219EE001A1	87-1646	110.4	110
S-220FF001A1	87-1647	2.5	94
S-221GG001A1	87-1648	11.3	73
S-222HH001A1	87-1649	562.0	87
S-223II001A1	87-1650	4.3	80
S-224JJ001A1	87-1651	21.5	98
S-225KK001A1	87-1652	0.7*	95
S-226LL001A1	87-1653	9.0	100
S-227MM001A1	87-1654	7.4	97
S-228MM002A1	87-1655	8.3	72
S-22900001A1	87-1656	6.6	100
S-230PP001A1	87-1657	10.4	110
S-231QQ001A1	87-1658	1.4	100
S-232FB001A1	87-1659	ND0.1	100

(* denotes the average of duplicate analysis)

REVISED 1/18/88

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Table II

Results of Duplicate Analysis
ug/g dry weight basis

Sample ID	Exp. 1	Exp. 2
S-216BB001A1	14.2	14.7
S-225KK001A1	0.83	0.62
S-232FB001A1	ND0.1	ND0.1

Table III

Results of Spiking Experiments
ug/g dry weight basis

Sample ID	Analysis	Added	Expected	Found	Recovered (%)
S-216BB001A1	14.5	4.0	18.5	18.2	3.7 (93)
S-225KK001A1	0.7	2.0	2.7	3.1	2.4 (120)
S-232FB001A1	0.0	ND0.1	1.0	1.3	1.3 (130)

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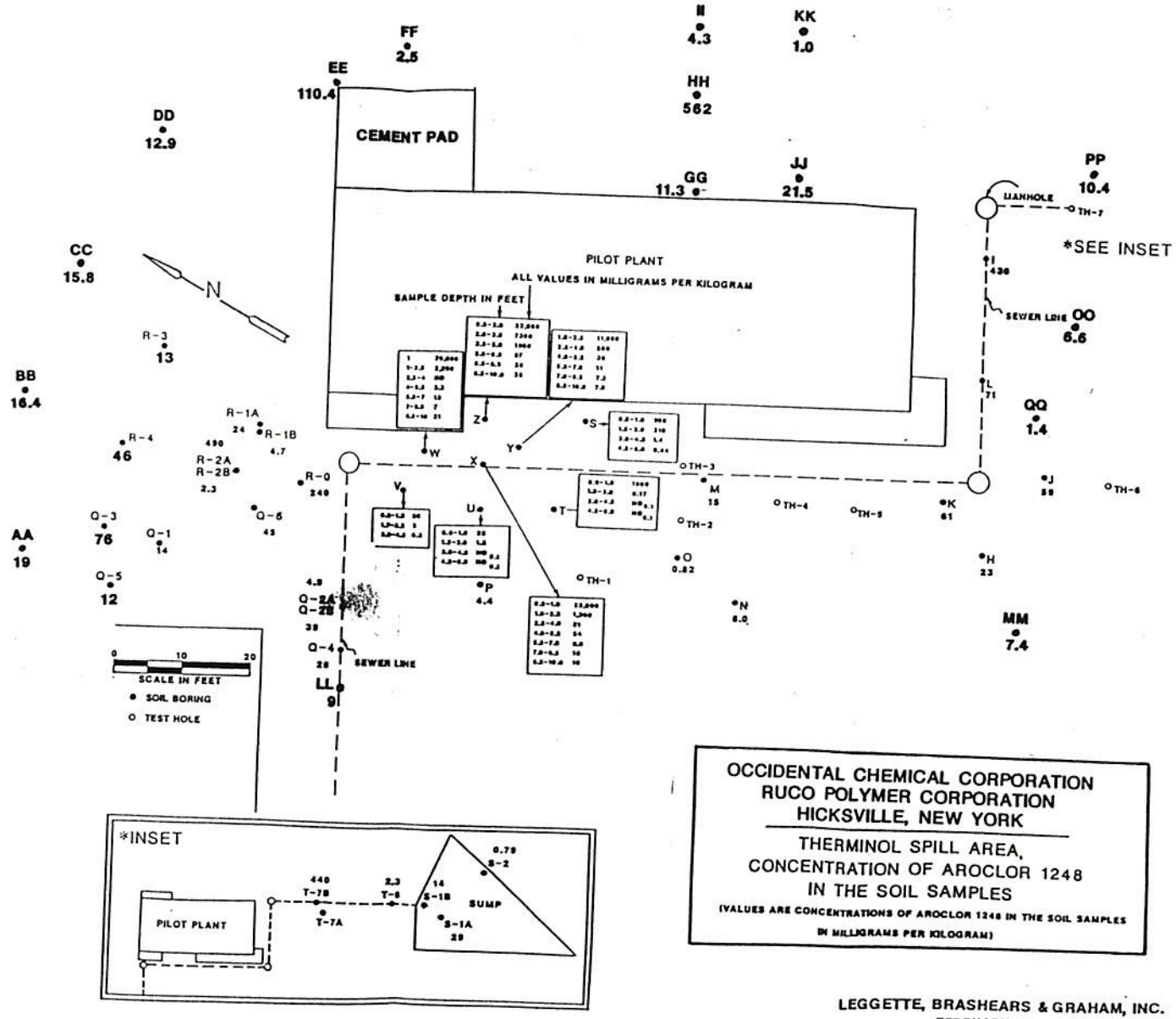
Table IV

Moisture Content
Soils from Hicksville, N.Y.

Sample ID	% Moisture
S-215AA001A1	2.98
S-216BB001A1	10.32
S-217CC001A1	7.24
S-218DD001A1	11.96
S-219EE001A1	10.86
S-220FF001A1	6.70
S-221GG001A1	12.85
S-222HH001A1	10.04
S-223II001A1	6.56
S-224JJ001A1	18.89
S-225KK001A1	5.06
S-226LL001A1	7.02
S-227MM001A1	7.61
S-228MM002A1	****
S-229OO001A1	5.65
S-230PP001A1	6.69
S-231QQ001A1	4.45
S-232FB001A1	20.43

**** Moisture content of this sample not determined since the sample consisted only of rock and gravel.

FIGURE 1



OCCIDENTAL CHEMICAL CORPORATION
RUCO POLYMER CORPORATION
HICKSVILLE, NEW YORK

THERMINOL SPILL AREA,
CONCENTRATION OF AROCLOR 1248
IN THE SOIL SAMPLES

(VALUES ARE CONCENTRATIONS OF AROCLOR 1248 IN THE SOIL SAMPLES IN MILLIGRAMS PER KILOGRAM)

LEGGETTE, BRASHEARS & GRAHAM, INC.
FEBRUARY 1988

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP 5840 GC Column ID: DB-5

DATE(S) OF ANALYSIS FROM: 12/21/87 TO: 12/28/87
TIME(S) OF ANALYSIS FROM: _____ TO: _____

DATE OF ANALYSIS 12/21/87
TIME OF ANALYSIS 1750
LAB SAMPLE ID (STANDARD) Aroclor 1248

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC								
Heptaclor								
Aldrin								
Hept. Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endo.Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
a. Chlordane								
g. Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248		15.0	30.0	1.0				
Aroclor-1254							y	
Aroclor-1260								

Under QNT Y/N: enter Y if quantitation was performed, N if not performed. %D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteri.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition

page __ of __

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP 5840 GC Column ID: DB-5

DATE(S) OF ANALYSIS FROM: 12/21/87 TO: 12/28/87
TIME(S) OF ANALYSIS FROM: _____ TO: _____

DATE OF ANALYSIS 12/23/87
TIME OF ANALYSIS 1034
LAB SAMPLE ID (STANDARD) Aroclor 1248

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC								
Heptaclor								
Aldrin								
Hept. Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endo.Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
a. Chlordane								
g. Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248		15.0	30.0	1.0			y	
Aroclor-1254								
Aroclor-1260								

Under QNT Y/N: enter Y if quantitation was performed, N if not performed. %D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition

page __ of __

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP 5840 GC Column ID: DB-5

DATE(S) OF ANALYSIS FROM: 12/21/87 TO: 12/28/87
TIME(S) OF ANALYSIS FROM: _____ TO: _____

DATE OF ANALYSIS 12/24/87
TIME OF ANALYSIS 0315
LAB SAMPLE ID (STANDARD) Aroclor 1248

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC								
Heptaclor								
Aldrin								
Hept. Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endo.Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
a. Chlordane								
g. Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248		15.0	30.0	1.0			y	
Aroclor-1254								
Aroclor-1260								

Under QNT Y/N: enter Y if quantitation was performed, N if not performed. %D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

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page __ of __

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP 5840 GC Column ID: DB-5

DATE(S) OF ANALYSIS FROM: 12/21/87 TO: 12/28/87
TIME(S) OF ANALYSIS FROM: _____ TO: _____

DATE OF ANALYSIS 12/24/87
TIME OF ANALYSIS 1900
LAB SAMPLE ID (STANDARD) Aroclor 1248

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC								
Heptaclor								
Aldrin								
Hept. Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endo.Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
a. Chlordane								
g. Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248		15.0	30.0	1.0			y	
Aroclor-1254								
Aroclor-1260								

Under QNT Y/N: enter Y if quantitation was performed, N if not performed. %D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteri

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition

page __ of __

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP 5840 GC Column ID: DB-5

DATE(S) OF ANALYSIS FROM: 12/21/87 TO: 12/28/87
TIME(S) OF ANALYSIS FROM: _____ TO: _____

DATE OF ANALYSIS 12/28/87
TIME OF ANALYSIS 0700
LAB SAMPLE ID (STANDARD) Aroclor 1248

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC								
Heptaclor								
Aldrin								
Hept. Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endo.Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
a. Chlordane								
g. Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248		15.0	30.0	1.0			y	
Aroclor-1254								
Aroclor-1260								

Under QNT Y/N: enter Y if quantitation was performed, N if not performed. %D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition

page __ of __

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP 5840 GC Column ID: DB-5

DATE(S) OF ANALYSIS FROM: 12/21/87 TO: 12/28/87
TIME(S) OF ANALYSIS FROM: _____ TO: _____

DATE OF ANALYSIS 12/29/87
TIME OF ANALYSIS 1740
LAB SAMPLE ID (STANDARD) Aroclor 1248

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC								
Heptaclor								
Aldrin								
Hept. Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endo.Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
a. Chlordane								
g. Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248		15.0	30.0	1.0				
Aroclor-1254							y	
Aroclor-1260								

Under QNT Y/N: enter Y if quantitation was performed, N if not performed. %D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteri

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition

page __ of __

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP 5840 GC Column ID: DB-5

DATE(S) OF ANALYSIS FROM: 12/21/87 TO: 12/28/87
TIME(S) OF ANALYSIS FROM: _____ TO: _____

DATE OF ANALYSIS 12/30/87
TIME OF ANALYSIS 1300
LAB SAMPLE ID (STANDARD) _____

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC								
Heptaclor								
Aldrin								
Hept. Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endo.Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
a. Chlordane								
g. Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248		15.0	30.0	1.0				
Aroclor-1254							y	
Aroclor-1260								

Under QNT Y/N: enter Y if quantitation was performed, N if not performed. %D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition

page __ of __

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP 5840 GC Column ID: DB-5

DATE(S) OF ANALYSIS FROM: 12/21/87 TO: 12/28/87
TIME(S) OF ANALYSIS FROM: _____ TO: _____

DATE OF ANALYSIS 12/31/87
TIME OF ANALYSIS 0019
LAB SAMPLE ID (STANDARD) Aroclor 1248

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC								
Heptaclor								
Aldrin								
Hept. Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endo.Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
a. Chlordane								
g. Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248		15.0	30.0	1.0			y	
Aroclor-1254								
Aroclor-1260								

Under QNT Y/N: enter Y if quantitation was performed, N if not performed. %D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteri

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition

page __ of __

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Level: (low/med) Med

	EPA SAMPLE NO.	S1 (C66) #	OTHER
01	S-215 AA 001A1	55	
02	S-216 BB 001A1	99	
03	S 217 CC 001A1	97	
04	S-218 DD 001A1	97	
05	S-219 EE 001A1	110	
06	S-220 FF 001A1	94	
07	S-221 GG 001A1	73	
08	S-222 HH 001A1	87	
09	S-223 II 001A1	82	
10	S-224 JJ 001A1	98	
11	S-225 KK 001A1	95	
12	S-226 LL 001A1	100	
13	S-227 MM 001A1	97	
14	S-228 NM 001A1	72	
15	S-229 OO 001A1	100	
16	S-230 PP 001A1	110	
17	S-231 QQ 001A1	100	
18	S-232 FB 001A1	100	
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

ADVISORY QC LIMITS (24-154)

S1 (C66) = Hexachlorobenzene

Column to be used to flag recovery values with an asterisk

* Values outside of QC limits

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

EPA Sample No. for Method Blank: _____ Lab Sample ID: 87-1659

Matrix: (soil/water) Soil Level: (low/med) Med Lab File ID: _____

Date Extracted: 12/21/87 Extraction: (SepF/Cont/Sonc) Sonc

Date Analyzed (1): 12/25/87 Date Analyzed (2): _____

Time Analyzed (1): 0416 Time Analyzed (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

GC Column ID (1): DB-5 GC Column ID (2): _____

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID (1)	DATE ANALYZED 1	LAB SAMPLE ID (2)	DATE ANALYZED 2
01	S232FB001A1	87-1659	12/25/87		
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

COMMENTS: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-215AA001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: ~~87-1642~~ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1642 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-216BB001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1643 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-217 CC 0C141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1644 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-218DD001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1645 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-219EE001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1646 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1	15.0	30.0	Y	
02	Column 2				
03	Column 1				
04	Column 2				
05	Column 1				
06	Column 2				
07	Column 1				
08	Column 2				
09	Column 1				
10	Column 2				
11	Column 1				
12	Column 2				

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-220FF00141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1647 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-22166 CC.41

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1648 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1	15.0	30.0	Y	
02	Column 2				
03	Column 1				
04	Column 2				
05	Column 1				
06	Column 2				
07	Column 1				
08	Column 2				
09	Column 1				
10	Column 2				
11	Column 1				
12	Column 2				

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO

S-222HH001A

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1649 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

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PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-223 I I 00141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1650 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1	15.0	30.0	Y	
02	Column 2				
03	Column 1				
04	Column 2				
05	Column 1				
06	Column 2				
07	Column 1				
08	Column 2				
09	Column 1				
10	Column 2				
11	Column 1				
12	Column 2				

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-224JJ 00141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1651 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-225KK 001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1652 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1	15.0	30.0	Y	
02	Column 2				
03	Column 1				
04	Column 2				
05	Column 1				
06	Column 2				
07	Column 1				
08	Column 2				
09	Column 1				
10	Column 2				
11	Column 1				
12	Column 2				

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO

S-226LL 00141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1653 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

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PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-227MM00141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1654 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1 _____	15.0	30.0	Y	
02	Column 2 _____				
03	Column 1 _____				
04	Column 2 _____				
05	Column 1 _____				
06	Column 2 _____				
07	Column 1 _____				
08	Column 2 _____				
09	Column 1 _____				
10	Column 2 _____				
11	Column 1 _____				
12	Column 2 _____				

Comments: _____

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO

S-228MM002A

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1655 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-22900 6t141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1656 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-23CPP00141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1657 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1	15.0	30.0	Y	
02	Column 2				
03	Column 1				
04	Column 2				
05	Column 1				
06	Column 2				
07	Column 1				
08	Column 2				
09	Column 1				
10	Column 2				
11	Column 1				
12	Column 2				

Comments: _____

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-231QQ60141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1658 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1		15.0	30.0	Y	
02	Column 2					
03	Column 1					
04	Column 2					
05	Column 1					
06	Column 2					
07	Column 1					
08	Column 2					
09	Column 1					
10	Column 2					
11	Column 1					
12	Column 2					

Comments: _____

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PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

S-232FB001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column ID (1): DB-5 GC Column ID (2): _____

Instrument ID (1): HP 5840 Instrument ID (2): _____

Lab Sample ID (1): 87-1659 Lab Sample ID (2): _____

Lab File ID: _____ (only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor 1248	Column 1	15.0	30.0	Y	
02	Column 2				
03	Column 1				
04	Column 2				
05	Column 1				
06	Column 2				
07	Column 1				
08	Column 2				
09	Column 1				
10	Column 2				
11	Column 1				
12	Column 2				

Comments: _____

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-215 AA 001 A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1642

Sample wt/vol: 1.07 (g/mL) ID Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	19.0	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-216BB001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1643

Sample wt/vol: 1.16 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	14.5	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-217CC001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1644

Sample wt/vol: 1.25 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248		
11097-69-1	Aroclor-1254	15.8	
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-218DD001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1645

Sample wt/vol: 1.0 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	12.9	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-219EE00141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1646

Sample wt/vol: 1.19 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: 1:10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	10.4	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-22L FF001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1647

Sample wt/vol: 1.06 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248		
11097-69-1	Aroclor-1254	2.5	
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-221EG001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1648

Sample wt/vol: 1.28 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	11.3	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-222HH00141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1649

Sample wt/vol: 1.07 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: 1:10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	562.0	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-223II 0C141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1650

Sample wt/vol: 1.17 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	4.3	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-224JJ001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1651

Sample wt/vol: 1.13 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	21.5	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-225KK001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1652

Sample wt/vol: 1.09 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248		
11097-69-1	Aroclor-1254	0.7	
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-226LL601A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1653

Sample wt/vol: 1.04 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	90	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-227MM001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1654

Sample wt/vol: 1.04 (g/mL) 1D Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	7.4	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-228MM002A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1655

Sample wt/vol: 10.01 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: 1:10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	8.3	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-22900 00141

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1656

Sample wt/vol: 1.02 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	6.6	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-230PP001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1657

Sample wt/vol: 1.14 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248		
11097-69-1	Aroclor-1254	10.4	
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

5-231QQ001A1

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1658

Sample wt/vol: 1.20 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g	Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	1.4	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-232FB001.41

Lab Name: Occidental Chemical Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 87-1659

Sample wt/vol: 1.08 (g/mL) 10 Lab File ID: _____

Level: (low/med) Med Date Received: 12/18/87

% Moisture: not dec. _____ dec. X Date Extracted: 12/21/87

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 12/23/87

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/g

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC		
319-85-7	beta-BHC		
319-86-8	delta-BHC		
58-89-9	gamma-BHC(Lindane)		
76-44-8	Heptachlor		
309-00-2	Aldrin		
1024-57-3	Heptachlor epoxide		
959-98-8	Endosulfan I		
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-22-9	Aroclor-1242		
12672-29-6	Aroclor-1248	0.0	
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

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MEMO

To A. F. Weston

Date November 19, 1987
REVISED: 12/08/87

From T.J. Yagley

Subject Analysis of Four Soil Samples from Hicksville for Aroclor 1248

COPIES: P.T. Holt, R.G. Badger, TIC

SUMMARY

On October 28, 1987, four soil samples from the Hicksville, NY site were taken into custody at the Grand Island Technology Center. Using SW-846 methodology, these four samples were analyzed for Aroclor 1248 at a detection limit of 0.1 ug/g (ppm). The identity and PCB content were as follows:

ETC #	Location	ug/g Aroclor 1248
R2705	Q3	76
R2707	Q5	12
R2708	R3	13
R2709	R4	46

EXPERIMENTAL

The soil samples were prepared for analysis by using protocol as described in SW-846.

A portion of the sample was carefully weighed into a small beaker, and with stirring, kiln dried sodium sulfate was added until the mixture had the consistency of dry sand. If the sample was to be spiked for recovery information, it was done at this time. The mixture was extracted once with 10 mL of hexane (B&J Distilled in Glass) by use of a sonic probe. With careful rinsing the extract was transferred through a Pasteur pipet packed with glass wool and sodium sulfate into a 15 mL concentrator tube. The extract was adjusted to a final working volume of 10.0 mL by nitrogen blowdown.

The extracts were analyzed on a Hewlett-Packard 5840 Gas Chromatograph using a 30 meter fused silica DB-5 capillary column under the following conditions:

Temperature Program	- 140°C for 1 min, then 3.0°C/min to 190°C and hold for 7 minutes then 1.0°C/min to 240°C and hold for 20 minutes
Detector	- Ni^{63} Electron Capture @ 350°C
Injection Mode	- Splitless, 0.5 min purge, port at 250°C.
Carrier Gas	- Helium @ 2 cc/minute
Make-up Gas	- 5% Methane in Argon @ 50 cc/min.

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Aroclor 1248 in the extract was quantitated by summing the area counts of ten peaks and then comparison with the summed area counts of known Aroclor 1248 standards. A five point calibration curve was found to have a correlation coefficient of 0.9951. If the summed total of the area count in the extract exceeded the linear range of the standards the extract was diluted and reanalyzed.

RESULTS AND DISCUSSION

The results of the analysis can be found in Table I. All numbers are reported on a ug/g dry weight basis. Cross references to the Occidental sample number, the ETC number and the field identification are all given. Table II contains the results of a duplicate analysis, in which Q5 was prepared and analyzed in duplicate. The results of spike recoveries are found in Table III. The Aroclor 1248 content was low enough in Q5 to allow for spiking, and the recovery of a 2 ug/g spike was excellent. A blank soil was spiked at 2 ug/g and its recovery was also excellent.

Timothy Yagley

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/jb

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TABLE I
Results of Analysis
Aroclor 1248 Content
(ug/g dry weight)

Field Identification	ETC #	OCC #	ug/g Aroclor 1248
201Q3001A1	R2705	87-963	76
203Q5001A1	R2707	87-964	12
204R3001A1	R2708	87-965	13
205R4001A1	R2709	87-966	46

TABLE II
Results of Duplicate Analysis
Aroclor 1248 Content
(ug/g dry weight)

Field Identification	ETC #	OCC #	Exp 1	Exp 2
203Q5001A1	R2707	87-964	13	10

TABLE III
Results of Spiking Experiments
Recovery of Aroclor 1248
(ug/g dry weight)

Sample ID
: 203Q5001A1

Analysis	Added	Expected	Found	Recovered	% Recovery
11.5	2.0	13.5	13.3	1.8	90

Sample ID: Blank Soil

ND 0.1	2.0	2.0	2.0	2.0	100

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